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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,563	11/19/2001	Joseph C. Sher	MICRON.113C1	2553
20995 7590 03/23/2007 KNOBBE MARTENS OLSON & BEAR LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614			EXAMINER TRA, ANH QUAN	
			ART UNIT 2816	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		NOTIFICATION DATE	DELIVERY MODE	
3 MONTHS		03/23/2007	ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 03/23/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

09/989,563

Applicant(s)

SHER ET AL.

Examiner

Quan Tra

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16, 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in response to the amendment filed 02/07/07. The rejection in previous office action is maintained.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-16 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Javanifrad et al. (USP 5483486, Applicant submitted IDS) in view of Furumochi (USP 5473277, Applicant submitted IDS).

As to claim 1, Javanifrad et al. shows in figure 14 a circuit comprising: a reference circuit (316); a voltage regulator (318) electrically coupled to the reference circuit which generates a first control signal (REG); a charge pump (320) which receives the control signal from the voltage regulator, the charge pump generating the test supply voltage (Vout). Thus, figure 14 shows all limitations of the claim except for the reference having a plurality of voltage regulation devices and at least one bypass device connected to at least one of the plurality of voltage regulation devices. However, Furumochi's figure 5 shows a reference circuit having plurality of voltage regulation devices (T1-T4) and at least one bypass device (SW0) connected to at least one of the plurality of voltage regulation devices. Furumochi's circuit has the advantage of varying the voltage level at the output node (OUT). Thus, it would have been obvious to one having ordinary skill in the art to use Furumochi's figure for Javanifrad et al.'s reference circuit for the purpose of generating a variable reference voltage, therefore controlling the output level of the charge pump. Thus, with the combination, it is inherent that the at least one bypass

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device (SWO(TN4)) is activated following the certification of the semiconductor device to bypass the at least one of the plurality of voltage regulation devices from the clamp circuit to lower the clamping threshold of the clamp circuit, the voltage regulator generating a second control signal responsive to the lowered clamping threshold of the clamp circuit to cause the charge pump to generate the operational supply voltage, and the clamp circuit is configured to allow an output to track an input below a clamping maximum (the total threshold of the diode connected transistors).

As to claim 2, Furumochi's figure 5 shows the plurality of voltage regulation devices comprise diodes.

As to claim 3, Furumochi's figure 5 shows the diodes are implemented through transistors.

As to claim 4, Furumochi's figure 5 further shows the bypass device comprising a fuse (FU) in series with a transistor (TN4).

As to claim 5, Furumochi's figure 5 shows bypass device is activated by blowing the fuse.

As to claim 6, with the combination of the prior arts, it is inherent that value of the operational supply voltage is reduced for each voltage regulation device bypassed.

As to claim 7, with the combination of the prior arts, it is inherent that the voltage regulation devices limit the maximum voltage output of the clamp circuit.

As to claim 8, with the combination of the prior arts, it is inherent that the first control signal reduces the test supply voltage when the voltage regulation devices limit the output of the clamp circuit.

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As to claim 9, with the combination of the prior arts, it is inherent that the second control signal reduces the operational supply voltage when the non-bypassed voltage regulation devices (T1, T2..) limit the output of the clamp circuit.

Claims 10-16 and 25 recite similar limitations of claims 1-9. Therefore, they are rejected for the same reasons (see further in figure 4).

Response to Arguments

The same arguments in previous rejection are applied. Furumochi's voltage clamp circuit is for only clamping voltage that is higher than the total threshold of the diode connected transistors. The clamp circuit cannot clamp voltage that is lower than the total threshold of the diode connected transistors, i.e. if the total thresholds of the transistors are 2.8 volts, the output of the clamp circuit is 2.8 volts if the input voltage is higher than 2.8 volts. However, if the input voltage is less than 2.8 volts, such as 2 volts, the output of the clamp circuit cannot be 2.8 volts because there is not enough supply voltage. The output of the clamp circuit would be the input voltage, which is 2 volts. Therefore, the clamp circuit would track the input voltage if the input voltage was less than the total thresholds of the transistors.

Conclusion

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quan Tra whose telephone number is 571-272-1755. The examiner can normally be reached on 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



QUAN TRA
PRIMARY EXAMINER
ART UNIT 2816

March 15, 2007